

WHAT IS CLAIMED IS:

1 1. A system for implementing an electronic market comprising:
2 first means for defining a set of attributes and associated descriptor
3 variables involved in market transactions and assigning importance values to said descriptor
4 variables;
5 second means for computing match scores for said market transactions
6 based on quality of the match for each of the attributes and importance values associated with
7 each of the attributes; and
8 third means for clearing said electronic market in accordance with said
9 match scores.

1 2. The system of Claim 1 wherein said first means includes an
2 administrator interface for allowing an administrator to define said descriptor variables.

1 3. The system of Claim 2 wherein said first means includes a configurator
2 in communication with said administrator interface for allowing said administrator to assign a
3 first set of one or more importance values to one or more of said descriptor variables,
4 respectively.

1 4. The system of Claim 3 wherein said first set of one or more importance
2 values includes default importance values.

1 5. The system of Claim 4 wherein said first set of one or more importance
2 values includes seller importance values assigned to said descriptor variables by a seller
3 seeking to transact with a buyer via said electronic market.

1 6. The system of Claim 3 wherein said administrator interface includes
2 means for configuring a user interface of said market to allow a participant in a market
3 transaction to assign a second set of one or more of said importance values to said descriptor
4 variables.

1 7. The system of Claim 6 wherein said second set of one or more
2 importance values includes buyer importance values assigned to said descriptor variables by a
3 buyer seeking to transact with a seller via said electronic market.

1 8. The system of Claim 7 wherein one or more of said descriptor
2 variables are continuous descriptor variables.

1 9. The system of Claim 1 wherein said second means includes a matching
2 engine for computing said match scores based on a predetermined evaluation method
3 specified via said administrator interface and a match score computation method.

1 10. The system of Claim 9 wherein said predetermined evaluation method
2 includes means for mapping descriptor values into corresponding preference numbers (D_{ijr})
3 within a predetermined number range.

1 11. The system of Claim 10 wherein said predetermined evaluation
2 method includes a more is better method, an equal to method, a less is better method, a
3 distance method and qualitative evaluations methods.

1 12. The system of Claim 10 wherein said predetermined number range is
2 between 0 and 1.

1 13. The system of Claim 12 wherein said matching engine includes
2 software for computing a total match score (Z_{ij}) according to said match score computation
3 method based on said importance values according to the following equation:
4

$$Z_{ij} = \sqrt{Z_{ij}^i Z_{ij}^j},$$

6 where Z_{ij}^i is a match score based on importance values assigned by a first
7 participant in said electronic market and any corresponding preference numbers D_{ijr} , and Z_{ij}^j
8 is a match score based on importance values associated with a second participant in said
9 market and any corresponding preference numbers D_{ijr}

1 14. The system of Claim 13 wherein said first participant is a seller and
2 said second participant is a buyer.

1 15. The system of Claim 12 wherein said third means includes one-to-
2 many market-clearing software.

1 16. The system of Claim 12 wherein said one-to-many market-clearing
2 software.

1 17. The system of Claim 12 wherein said third means includes one-to-one
2 market-clearing software.

1 18. The system of Claim 17 wherein said one-to-one market-clearing
2 software includes means for searching all total match scores Z_{ij} for market participants i and
3 j ; selecting the maximum value of Z_{ij} ; matching participant i to participant j to yield cleared
4 participants in response thereto; removing Z_{ij} corresponding to said cleared participants from
5 the set of all Z_{ij} to yield a reduced Z_{ij} ; and repeating the above steps for the reduced Z_{ij} .

1 19. The system of Claim 18 wherein said means for clearing markets
2 includes means for selectively clearing sections of a matrix of values corresponding to Z_{ij} .

1 20. The system of Claim 1 wherein said third means includes an
2 endogenous market definer for automatically defining said descriptor variables based on pre-
3 existing market data.

1 21. The system of Claim 1 wherein said third means includes a semi-
2 endogenous market definer.

1 22. The system of Claim 21 wherein said semi-endogenous market definer
2 includes means for selecting a starting seller to participate in market transactions, said
3 starting seller best matched with all buyers participating in said electronic market.

1 23. The system of Claim 22 wherein said means for selecting includes
2 means for selecting, as said starting seller, a seller that maximizes $\sum_j Z_{ij}$, where i is a seller
3 index, j is a buyer index, and Z_{ij} is a total match score for the i^{th} seller and the j^{th} buyer.

1 24. The system of Claim 23 wherein said semi-endogenous market definer
2 includes means for selecting additional sellers to participate in said electronic market, said
3 additional sellers satisfying the following conditions:
4

$$\sum_j \frac{(z_{kj} - \bar{z}_k)(z_{ij} - \bar{z}_i)}{\sigma_{kj}\sigma_{ij}} > T_1,$$

$$\sum_j Z_{ij} > T_2,$$

where k represents the value of the seller index i associated with said starting seller; z_{ij} is a match value of a match between a seller i (an i^{th} seller) and a j^{th} buyer; z_{kj} is a match value of a match between said starting seller k and a j^{th} buyer; \bar{z}_k is an average of all match values of the matches between said starting seller k and each seller j ; \bar{z}_i is an average of all match values of the matches between said seller i and each seller j ; σ_{kj} is a standard deviation of z_{kj} taken across all buyers j ; σ_{ij} is a standard deviation of z_{ij} taken across all buyers j ; T_1 is a first predetermined threshold; and T_2 is a second predetermined threshold

$$T_2 \approx \sum_j Z_{ij}.$$

25. [2] The system of Claim 1 wherein said electronic market is an internal allocation market, a business-to-business concierge market, an electronic pawn shop market, an internal allocation market, electronic wholesaler, a trading post, an auction, or a web credit market.

26. The system of Claim 25 wherein said auction is a qualified auction wherein market participants are qualified based on said match scores.

27. The system of Claim 1 wherein said electronic market is a modified competitive market and said third means includes modified competitive market-clearing software.

28. The system of Claim 27 wherein said modified competitive market-clearing software includes means for pairing buyers and sellers in accordance with a match score incorporating descriptor variables pertaining to qualities of said buyers and sellers.

29. A system for generating an e-commerce website comprising:
first means for indicating products and/or services to be sold via said e-commerce website;

4 second means for providing a list of attributes associated with said
5 products and/or services;

6 third means for selectively associating weights with said attributes; and

7 fourth means for automatically generating an e-commerce website in
8 accordance with said products and/or services, said list of attributes, and said weights.

1 30. The system of Claim 29 wherein said third means includes a user
2 interface and an administrator interface in communication with a weight-mapping function.

1 31. The system of Claim 29 wherein said fourth means includes means for
2 selecting a type of market for use with said e-commerce site.

1 32. The system of Claim 31 wherein said type of market is an exchange
2 model, a competitive market, a modified competitive market, a consignment store, a qualified
3 auction, an internal allocation, and/or a futures and credit market.

1 33. The system of Claim 29 wherein said fourth means includes means for
2 searching a market database in accordance with said attributes and weights of said products
3 and/or services.

1 34. The system of Claim 33 wherein said means for searching a market
2 database includes fifth means for receiving one or more inputs; sixth means for selectively
3 weighting said one or more inputs and providing one or more weighted inputs in response
4 thereto; and seventh means for accessing data in said database in accordance with said one or
5 more weighted inputs.

1 35. The system of Claim 34 wherein said means for searching a market
2 database is an e-commerce search engine for matching products or services to a user of said
3 engine in accordance with said one or more inputs input by said user and/or said
4 administrator.

1 36. The system of Claim 35 wherein said sixth means includes one or more
2 interfaces for specifying a continuous or discrete weight.

1 37. The system of Claim 36 wherein said one or more interfaces includes a
2 user interface and an administrator interface, said administrator interface includes means for

3 allowing said administrator to adjust default weights associated with said products and/or
4 services.

1 38. A matching system comprising:
2 first means for receiving one or more inputs;
3 second means for selectively weighting said one or more inputs via a
4 continuous weight and providing one or more weighted inputs in response thereto; and
5 third means for accessing data in accordance with said one or more weighted
6 inputs.

1 39. The system of Claim 38 wherein said first means includes a user
2 interface and an administrator interface, said administrator interface including means for
3 allowing said administrator to adjust default weights associated with said products and/or
4 services.

1 40. A matching system for implementing a transaction in accordance with
2 preferences or match criteria comprising:
3 first means for receiving preferences or match criteria as input;
4 second means for ranking said preferences or match criteria according to
5 importance and providing ranked criteria in response thereto; and
6 third means for accessing data in accordance with said ranked criteria.

1 41. An electronic market for implementing a transaction between a first
2 entity and a second entity system:
3 first means for individually valuing relative preferences of
4 characteristics associated with said second entity relative to said first entity and providing
5 preference values in response thereto and
6 second means for searching a database having information pertaining
7 to plural second entities and returning a matched result pairing said first entity with said
8 second entity selected from said plural second entities based on said preference values; and
9 third means for clearing said electronic market according to said
10 matched result.

1 42. The system of Claim 41 wherein said first entity corresponds to one or
2 more users, said second entity corresponds to one or more products or services, and said
3 characteristics are attributes associated with said one or more products or services.

1 43. The system of Claim 41 wherein said first means includes a user
2 interface for inputting said relative preferences in terms of continuous or discrete values
3 associated with each of said attributes.

1 44. An e-commerce market comprising:
2 first means for ranking preferences of attributes associated with a
3 product or service based on user input and providing ranked preferences in response thereto;
4 second means for searching a database of said products or services and
5 returning one or more matched results based on said ranked preferences; and
6 third means for clearing said market according to said matched results.

1 45. The system of Claim 44 wherein said one or more users include a
2 buyer and a seller.

1 46. The system of Claim 45 wherein said first means includes means for
2 enabling a user to describe each of said attributes.

1 47. The system of Claim 46 wherein said means for enabling further
2 includes means for permitting said customer to assign a first set of values to said attributes.

1 48. The system of Claim 47 wherein said means for enabling further
2 includes means for permitting a seller to assign second set of values to said attributes.

1 49. The system of Claim 48 wherein said second set of values represent
2 default values.

1 50. The system of Claim 49 wherein said system further includes a means
2 for scoring each product or service in accordance with said first set of values and said second
3 set of values associated with said attributes of said product or service.

1 51. An electronic market comprising:
2 first means for receiving one or more inputs;
3 second means for selectively weighting said one or more inputs via a
4 continuous weight and providing one or more weighted inputs in response thereto; and
5 third means for accessing data in accordance with a match score computed by
6 a mapping function, said match score representative of the quality of a match between said
7 data and said one or more weighted inputs; and

fourth means for clearing said electronic market in accordance with said match score and data.

52. The system of Claim 51 wherein said second means includes one or more interfaces for changing said continuous weight to a discrete weight.

53. The system of Claim 52 wherein said one or more interfaces includes a user interface and an administrator interface, said administrator interface including means for allowing said administrator to adjust weights associated with said data, said data associated with products and/or services.

54. A system for matching user preferences with a product or service comprising:

user interface for specifying relative preferences of attributes associated with said product or service by ranking said preferences via input from one or more users and

means for searching a database of said products or services and returning one or more matched results based on said relative preferences.

55. The system of Claim 54 wherein said efficient matching engine includes means for searching a database of said products and/or services and returning one or more matched results based on said relative preferences and said first set of preferences.

56. The system of Claim 55 wherein said one or more users include a buyer and a seller.

57. The system of Claim 56 wherein said user interface includes means for allowing a buyer to assign a second set of values to said attributes and includes means for permitting a seller to assign a third set of values to said attributes, said second set of values representing default values, which are associated with said attributes when said first set of values are not provided by said buyer.

58. The system of Claim 57 wherein said system further includes a means for scoring each product or service in accordance with said first set of values, said second set of values, and said third set of values associated with said attributes of said product and/or service.

1 59. A method for implementing an electronic market comprising the steps
2 of:
3 defining a set of attributes and associated descriptor variables involved
4 in market transactions and assigning importance values to said descriptor variables;
5 computing match scores for said market transactions based on said
6 importance values; and
7 clearing said electronic market in accordance with said match scores.

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